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5 UNITED STATES DISTRICT COURT  
6 EASTERN DISTRICT OF WASHINGTON  
AT SPOKANE

7 NEIL HENRICKSEN, et ux.,

8 Plaintiffs,

9 v.

10 CONOCOPHILLIPS COMPANY,

11 Defendant.

No. CV-07-224-JLQ

**DEFENDANT'S REPLY IN  
SUPPORT OF ITS DAUBERT  
MOTION TO EXCLUDE  
PLAINTIFFS' EXPERT MARCO  
KALTOFEN (Dkt. No. 87)**

NOTE FOR HEARING:  
July 1, 2008 at 9:00 a.m.  
Oral Argument Requested

13 Plaintiffs' response to Conoco's motion to exclude Marco Kaltofen (Dkt.  
14 No. 87) misses the point. It ignores the key criticism of his methodology – his  
15 recently concocted multiplier, which he uses to boost Henricksen's dose of  
16 benzene by 500%. This methodology has never been accepted by the scientific  
17 community, a burden Plaintiffs must satisfy. Kaltofen's multiplier has never been  
18 peer-reviewed, and no scientific literature, no learned treatise, no professional  
19 association has ever recognized its existence, much less its reliability. Indeed,  
20 nowhere in the Nordlinder paper itself is the multiplication of data sets by 500%,  
21 or the use of the data in the manner Kaltofen employs even discussed, much less  
22 sanctioned.

23 A theory without support in the medical or scientific literature because it  
24 was invented, for the first time, solely for litigation is unreliable. *Daubert v.*

1 *Merrell Dow Pharms., Inc.*, 43 F.3d 1311, 1319 (9<sup>th</sup> Cir. 1995) (*Daubert II*).  
2 Because Kaltofen’s multiplier and the incorrect assumptions upon which it is based  
3 lack reliability, his dose estimate must be excluded. FED. R. EVID. 702.

## 4 I. DISCUSSION

### 5 A. Kaltofen’s Recently Concocted Multiplier Remains an Anomaly.

6 No one except Mr. Kaltofen seems to understand how his “5x multiplier”  
7 manages to be consistent with the Nordlinder study on which he claims to rely.  
8 Nordlinder does not recognize a multiplier in his article, nor does he indicate that a  
9 multiplier can or should be derived from the data he reported. *See Exh. B,*  
10 *Nordlinder*.<sup>1</sup> Further, Nordlinder does not comment on the difference between the  
11 data for “open” terminals and “closed” terminals, and he certainly does not suggest  
12 that loading fuel in a “closed” versus “open” terminal results in a 5-fold increase in  
13 benzene exposure. *Id.* Nordlinder does not report that such results have been  
14 replicated elsewhere, and he does not suggest that such results can be applied to  
15 other work places. *Id.* Nordlinder simply tabulates and reports data collected at  
16 two terminals in Sweden. *Id.* at Table 3. *See McClain v. Metabolife Int’l, Inc.*, 401  
17 F.3d 1233, 1247 (11<sup>th</sup> Cir. 2005) (finding “a close analysis of the studies . . . [did]  
18 not authorize [the expert’s] opinions); *O’Connor v. C’wealth Edison Co.*, 13 F.3d  
19 1090, 1107 (7<sup>th</sup> Cir. 1994) (upholding exclusion of expert testimony where method  
20 and conclusion were not supported by the authors on which he claimed to rely).

21 Kaltofen, on the other hand, invents his multiplier for the purposes of this

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22 <sup>1</sup> All exhibits in this reply refer to the Declaration of Brett Young Supporting  
23 Defendant’s Motion to Exclude Plaintiffs’ Expert Marco Kaltofen.  
24

lawsuit in order to boost his dose calculation. *Daubert II*, 43 F.3d at 1317 (calling a “significant fact” whether expert developed opinions solely for litigation). By relying on a multiplier found nowhere in Nordlinder – the study on which he claims to rely – to achieve his desired dose, Kaltofen’s methodology suffers a fatal flaw. *McClain*, 401 F.3d at 1247 (criticizing expert who attempted to expand application of studies “beyond good science” in forming opinions). The Ninth Circuit has made clear that opinions invented for litigation must be supported by objective verification, something which Plaintiffs simply have not and cannot provide for Kaltofen’s self-proclaimed multiplier. *Daubert II*, 43 F.3d at 1317-18; *see also Lust v. Merrell Dow Pharms.*, 89 F.3d 594, 597 (9<sup>th</sup> Cir. 1996) (excluding expert who failed to point to an objective source demonstrating that his method and premises were generally accepted). An “expert’s bald assurance of validity is not enough. *Daubert II*, 43 F.3d at 1316. There must be “some objective, independent validation of the expert’s methodology.” *Id.*

Instead, Plaintiffs’ failure to support the multiplier methodology with some objective verification only reinforces the conclusion that Kaltofen worked backwards to reach his desired result and his opinions rest on an unreliable methodology. *Castellow v. Chevron USA*, 97 F. Supp. 2d 780, 797 (S.D. Tex. 2000) (“Such result-driven procedures are anathema to both science and law and are properly excluded because they are too speculative to assist the triers of fact.”). Tellingly, the multiplier employed by Kaltofen to calculate dose fails each and every *Daubert* factor:

- 1) Whether the expert’s theory has been subjected to peer review or publication: Kaltofen’s multiplier has ***never*** been subjected to peer

1 review or publication. Plaintiffs do not even try to support his  
2 concocted theory with any objective verification.

3 2) Whether the expert's underlying theory or technique has been  
4 generally accepted as valid by the relevant scientific community:  
5 Kaltofen's multiplier has ***never*** been relied upon to calculate dose in  
any other benzene-related study and is ***not*** generally accepted.

6 3) The extent to which the expert's theory has or can be tested:  
7 Kaltofen's multiplier ***cannot be and has not been tested***.

8 4) The known or potential rate of error of the expert's technique or  
9 theory and the existence and maintenance of standards controlling the  
10 technique's operation: Kaltofen's multiplier is subject to ***an***  
***enormous rate of error*** – up to 500%.

11 *Daubert v. Merrell Dow Pharms., Inc.*, 509 U.S. 579, 592-94 (1993). Following  
12 the Supreme Court's lead, the Ninth Circuit has recognized additional factors that  
can be considered:

13 5) The extent to which the expert's theory or technique relies upon a  
14 subjective interpretation: Kaltofen's multiplier is nothing if not a  
15 subjective hunch and mere speculation based on improper  
assumptions.

16 6) Non-judicial uses which have been made of the theory or technique:  
17 Plaintiffs ***cannot point to a single non-judicial use*** for Kaltofen's  
18 multiplier theory. In fact, there is no support for this theory from  
anyone besides Kaltofen himself.

19 *Daubert II*, 43 F.3d at 1317-18. While an expert's principles and methodology  
20 shape the focus of a *Daubert* inquiry, "conclusions and methodology are not  
21 entirely distinct from one another" and may lead to a determination that "there is  
22 simply too great an analytical gap between the data and the opinion offered." *Gen.*  
23 *Elec. Co. v. Joiner*, 522 U.S. 136, 146 (1997).

1 **B. Plaintiffs Offer No Response to Conoco's Other Objections to**  
2 **Kaltofen's Multiplier Methodology.**

3 In a last ditch effort to save Kaltofen's multiplier from exclusion, Plaintiffs  
4 mistakenly suggest that Conoco's objections are simply fodder for cross  
5 examination, hoping that this Court will abandon its gate-keeping role.

6 **1. Kaltofen fails to establish that Verma studied "open"**  
7 **terminals, or that the Nordlinder's "closed" terminals are the**  
8 **same as the terminals Henricksen used.**

9 Kaltofen's "multiplier" requires a comparison of a group of five Swedish  
10 workers at "closed" terminals to a group of 16 workers at "open" terminals, with  
11 the result being a "5x" difference in benzene exposure for the "closed" terminal  
12 workers. *See Nordlinder*. Kaltofen then extrapolates from this small, obscure,  
13 Swedish data set and postulates that because Henricksen worked at a "closed"  
14 terminal, his dose assessment of 1.6625 ppm years can be multiplied by 5.  
15 *Nowhere in the Swedish paper does it define the difference between "open" and*  
16 *"closed" terminals, and Kaltofen never bothered to verify what Nordlinder meant*  
17 *by a "open" or "closed" terminal.* *See Nordlinder*.

18 Without pause, Kaltofen next allegedly turned to the Verma study and  
19 assumed its terminals were "open" – another fact he did not verify before applying  
20 his multiplier to calculate Henricksen's dose. In fact, Kaltofen openly admits that  
21 he has no idea how many of the terminals Verma studied were "open" versus  
22 "closed." *Exh. A, Kaltofen* at 93:9-18. As his fellow expert Dr. Sawyer  
23 acknowledged, if the data set used comes from a "closed" terminal, it would be  
24 impermissible "double-dipping" to apply the 5x multiplier as Kaltofen has done.  
25 *Exh. C, Sawyer* at 190:23-191:7. It is not a reliable scientific methodology to make

1 comparisons without knowing the facts upon which those comparisons are based.

2 It is not science at all to use flawed comparisons for the first time in a lawsuit.  
3 *Marmo v. Tyson Fresh Meats*, 457 F.3d 748, 757 (8<sup>th</sup> Cir. 2006) (speculative  
4 testimony, unsupported by sufficient facts, or contrary to facts, is inadmissible).

5 **2. Plaintiffs fail to address Kaltofen’s sample size, which is too**  
6 **small to be reliable.**

7 Whether the Nordlinder study employed a sufficient sample size in assessing  
8 open and closed terminals goes to the heart of Kaltofen’s conclusion that “closed”  
9 terminals represent a 500% higher rate of benzene exposure. Proof of its  
10 unreliability is the fact that Kaltofen’s multiplier changes drastically if even one  
11 measurement is added to or subtracted from Nordlinder’s five “closed”  
12 measurements or 16 “open” measurements. Plaintiffs make no attempt to respond  
13 to the wealth of case law holding that small samples sizes lead to inaccurate results  
14 and **unreliable opinions**. See, e.g., *Earth Island Inst. v. Hogarth*, 494 F.3d 757,  
15 764-65 (9<sup>th</sup> Cir. 2007) (study on only 56 dolphins insufficient to extrapolate to a  
16 larger population); *Dunn v. Sandoz Pharms. Corp.*, 275 F. Supp. 2d 672, 681 (4<sup>th</sup>  
17 Cir. 2003) (study statistically insignificant and inconclusive due to inadequate  
18 sample size); *Kelley v. Am. Heyer-Schulte Corp.*, 957 F. Supp. 873, 880 (W.D.  
19 Tex. 1997) (study’s small sample size precluded reliable expert conclusions). The  
20 American Industrial Hygiene Association’s Publication agrees, explaining in *A*  
21 *Strategy for Assessing and Managing Occupational Exposures*, “[F]ewer than six  
22 measurements leaves a great deal of uncertainty about the exposure profile.” See  
23 *Exh. L, AIHA*.

1                   **3. Plaintiffs fail to address the confounding factors.**

2           Kaltofen fails to satisfy yet another prerequisite to reliability, ruling out  
3   confounding factors. Nordlinder did not discuss why the values for open versus  
4   closed terminals might be different, nor did he indicate that his study was designed  
5   with controls that would allow open versus closed terminals to be compared.  
6   *Nordlinder*. Kaltofen proceeds nonetheless, making no attempt to rule-out that  
7   other factors, besides the absence or inclusion of a roof, affected the difference  
8   between the two sample sets reported in Nordlinder. *See, e.g., Kelley*, 957 F. Supp.  
9   at 878 (finding it unreasonable for expert to make conclusions based on study  
10   where authors themselves admitted confounding factors weakened the results).  
11   Internal validity factors such as bias, chance, and confounding factors must be  
12   evaluated before a causal connection can be inferred from a study. *Magistrini v.*  
13   *One Hour Martinizing Dry Cleaning*, 180 F. Supp. 2d 584, 604 (D.N.J. 2002).  
14   Kaltofen ignores the need to do so, making his methodology suspect and  
15   unreliable.

16   **C. Kaltofen's Fundamental Misunderstanding of Industrial Hygiene**  
17   **Principles and Fatal Errors Doom His Exposure Estimate.**

18           Not only is Kaltofen's recently concocted multiplier unsupportable, his  
19   baseline benzene value – the number on which he relies to begin his dose  
20   calculation – is equally unreliable. Plaintiffs' attempt to explain away Kaltofen's  
21   mistake in selecting a baseline value and his obvious misapplication of Verma is  
22   nonsensical. Verma contains two different types of benzene values, permissible  
23   exposure limits and actual exposure measurements. *See Exh. E, Verma*.  
24   Occupational exposure limits (OELs) are set by regulatory authorities as a ceiling

1 on the level of benzene exposure during an 8-hour work period. Exposure limits  
2 are how much exposure is legally allowed. Exposure measurements on the other  
3 hand reveal how much benzene a worker was actually exposed to. *See Exh. H,*  
4 *Spencer Aff.*

5 In estimating Henricksen's baseline benzene exposure, Mr. Kaltofen  
6 confused Verma's description of occupational exposure limits with the actual  
7 exposure measurements of workers. This is analogous to equating the posted  
8 speed limit with how fast one actually drives. The only benzene exposure  
9 measurement for top-loaders that Verma reported is 0.12 ppm. Yet despite  
10 attempting to measure Henricksen's actual exposure to benzene, Kaltofen's dose  
11 methodology is based on a benzene exposure limit, which Verma adjusted to  
12 reflect a longer than 8-hour work shift. It is from this range of permissible  
13 exposure limits that Kaltofen claims to have selected his central value, which of  
14 course does not reflect or report actual exposure. Mr. Kaltofen's fundamental  
15 misunderstanding of industrial hygiene and of Verma's discussion of regulatory  
16 limits led him to misrepresent in his report (and under oath) that Verma was  
17 describing exposure measurements between 0.25 and 0.48 ppm, when he was not.  
18 But Kaltofen's mistakes do not end there.

19 If Kaltofen truly relied on Verma – as he testified under oath – the central  
20 value between Verma's range of exposure limits (.25 - .48) would be .365, making  
21 Henricksen's exposure, even applying the multiplier, less than 8 ppm-years, the  
22 magic number Plaintiffs feel they need to reach. Realizing the significance of  
23 selecting the true central value, Kaltofen instead chose .38 as his baseline value,  
24 simply because "it fell within the range." Based on this logic, .35 falls "within the



1 range” also – but of course Kaltofen did not use this value because it was too low  
2 to achieve his desired result. *See Castellow*, 97 F. Supp. at 797.

3 To justify his use of this made-up central value, Plaintiffs turn to the Irving  
4 and Grumbles study that measured benzene exposure levels at .38 ppm.<sup>2</sup> Looking  
5 past the numbers, Plaintiffs conveniently forget that the terminals in Irving may be  
6 “closed,” precluding application of Kaltofen’s multiplier. This puts Plaintiffs right  
7 back where they started. Accordingly, Kaltofen must claim he “relied” on  
8 Verma’s “open” terminals to multiple Henricksen’s dose by five, or his dose  
9 calculation does not reach 8 ppm-years.

10 Ultimately, Kaltofen is left with a baseline benzene value that necessarily  
11 suffers at least one of two fatal errors: 1) it relies on Verma and fails to reflect a  
12 true benzene exposure measurement because it is based on an arbitrary number  
13 within a range of exposure limits; or 2) it relies on Irving & Grumbles, and while  
14 reflecting a true benzene exposure measurement, it precludes application of  
15 Kaltofen’s multiplier to boost Henricksen’s exposure by 500%. Either way,  
16 Kaltofen’s methodology is unreliable and fails to reflect Mr. Henricksen’s actual  
17 exposure to benzene.

## 18 II. CONCLUSION

19 Because neither Kaltofen’s multiplier nor his methodology for calculating a  
20 baseline benzene value are reliable, much less supported by any objective source,

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21 <sup>2</sup> In his report and in his pre-deposition correspondence, Kaltofen claimed to  
22 have relied upon Irving for the .38 ppm value. By the time of his deposition, he  
23 had done an about-face, claiming that the .38 ppm value came from Verma.  
24

1 Kaltofen's opinions must be excluded under Rule 702. Conoco respectfully  
2 requests that this Court grant its motion to strike and enter an order excluding the  
3 testimony and opinions of Marco Kaltofen.

4 DATED this 25<sup>th</sup> day of June, 2008.

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DATED this 25<sup>th</sup> day of June, 2008.

Reply to Kaltofen- 11  
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